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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,520	02/22/2002	Mineo Nomoto	16869P-041600US	8662
20350	7590	02/04/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			PHAM, HOA Q	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,520

Applicant(s)

NOMOTO ET AL.

Examiner

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 7, 12-15, 17-31 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 20-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 12-15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Drawings

1. The drawings filed on 8/23/04 have been approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-5, 12-15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nyui et al (6,004,187) in view of Wiswesser et al (6,159,073).

Regarding claims 2, 12 and 17; Nyui et al discloses a polishing apparatus comprises a white light source (101,111) for irradiating white light onto the surface of a thin film (5a), detector (109) detects the reflected light from the sample and determines the thickness of the thin film by using the spectral waveform (figures 5 and 7) of the reflected light, where in the step of determining the thickness is determined by using information from the spectral waveform of the reflected light from prescribed regions (A, B in figure 2) which are determined using information from the spectral waveform on the basis of characteristic quality of the spectral waveform (figure 7A-7C) of the reflected light from the sample (5a). Nyui et al does not explicitly teach that the thin film is a transparent thin film; however, such a feature is known in the art as taught by

Wiswesser et al. Wiswesser et al, from the same field of endeavor, teach that the thin film to be determined is a transparent or semi-transparent thin film layer, such as oxide or nitride layer (column 7, lines 10-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the device of Nyui et al to measure the thickness of the transparent thin film because it does not matter what kinds of the thin film the device would function in the same manner.

Regarding claims 3-4,13-14 and 18-19; Nyui et al teaches that the characteristic quantity of the spectral waveform of the reflected light is based on the reflected intensity of the spectral waveform (column 5, lines 4-21 and column 10 lines 35-62, figures 5 and 7).

Regarding claims 5 and 15, Nyui et al teaches that the absolute film thickness $d(A)$ measured with the first measurement means 2a is considered as a reference (column 11, lines 49-56).

Response to Arguments

4. Applicant's arguments filed 11/8/04 have been fully considered but they are not persuasive.

a. Applicant notes that claims 17-19 are **not withdrawn** from the restriction requirement (see restriction mailed on 8/21/03). They are generic and examined with species (a) (claims 1-6 and 8-16) (see Office action mailed on 2/23/04). Applicant is

required to identify the status of claims 17-19 to comply with 37 C.F.R 1.121 in the next response.

b. Applicant's remarks argues that the references do not teach the limitation "the prescribed regions have been defined as being selected on the basis of at least one of three criteria as enumerated in each of claims 2 and 12). The argument is not deemed to be persuasive because it is not clear what applicant is trying to argue, as understood, the claims are read in the teachings of Nyui et al. The "prescribed regions" in the claims can be considered as "regions A and B" in figure 2 of Nyui et al and the thickness is determined on the basis of at least one of three criteria (i.e., the spectral waveforms in figures 5 and 7) (column 8, lines 16-26, column 9, lines 19-34, column 10, lines 53-65 and column 11, lines 29-56).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Following references are relative to thickness detection method and apparatus: Kakuchi et al (5,087,121) and Takeishi et al (6,425,801).

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

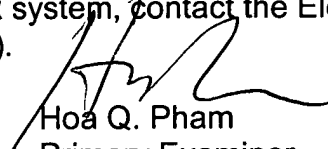
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
February 2, 2005